

REMARKS

I. PENDING CLAIMS AND SUPPORT FOR AMENDMENTS

Upon entry of this amendment, claims 1-41 will be pending in this application, with claims 7-9 and 13-41 withdrawn from consideration by the Examiner as being drawn to a non-elected invention.

II. REJECTION OVER LISENKO IN VIEW OF LIBUTTI ET AL.

In paragraphs 3-6 of the Office action, the Examiner has rejected claims 1-3 under 35 U.S.C. § 103(a) as obvious over Lisenko (U.S. Patent No. 5,639,550) in view of Libutti et al. (U.S. Patent No. 5,611,929). Applicant respectfully traverses this rejection and requests reconsideration and withdrawal thereof.

First, the Examiner has failed to establish a prima facie case of obviousness because there is no motivation to combine the teachings of Lisenko with those of Libutti. Lisenko is directed to producing a particulate powder having relatively large particles of support material, small particles of “primary material,” and binder resin adhering the small particles to the large particles. As the Examiner recognizes, Lisenko is very vague about exactly what these “primary materials” might be. What is clear, however, is that Lisenko never mentions or contemplates using zirconia as his primary material. In an attempt to cure this deficiency, the Examiner turns to Libutti et al. However, Libutti et al. is not directed to preparing a particulate composite. Instead, Libutti et al. prepare a fibrous mat, which may have a wide variety of materials disposed therein, including zirconia. The Examiner has not, however, explained why one of ordinary skill in this art would look from the art of particulate filtration materials to the art of fibrous filtration materials, select one

particular compound from the fibrous filtration art, and incorporate that compound into a particulate filtration material with the reasonable expectation that acceptable results would be achieved. There is no indication in either reference that zirconia could be adhered to the support particles of Lisenko by the binders of Lisenko, or that if adhesion could be obtained, adequate contact between the zirconia and the water to be filtered or purified would occur, that the binder would not occlude the surface of the zirconia, or that the material would function as intended by Lisenko.

Second, even if the references were combined in the manner suggested by the examiner, the claimed invention would not be obtained. Assuming, arguendo, that zirconia could be adhered to the surfaces of the support particles of Lisenko, the result would still be a filtration media that is a particulate. Applicant's claims recite that the binder used in his material binds the zirconia particles and the activated carbon particles into a rigid, porous solid. Lisenko does not bind his support particles together into a rigid porous solid filtration material; they remain particulates. Nowhere in any of the cited references is there any disclosure or suggestion to prepare what is essentially a carbon block filter containing zirconia. For this reason as well, the Examiner has failed to establish a prima facie case of obviousness.

The Examiner's comments concerning the obviousness or motivation to vary the amount of various components selected from the different cited references are noted. However, the variation in relative amounts goes well beyond "mere optimization" when the result is a completely different form of filtration material, namely a rigid porous block rather than a particulate. Rigid porous blocks can be prepared so as to have consistent, designed-in exclusion ratings, as well as provide

adsorption of dissolved species. Particulates are much more difficult to use in this way; the particles contact each other, pieces break off, channels form in the particle bed, through which unfiltered water can flow, and pressure drop can vary substantially. These problems are vastly decreased with the rigid porous material of the claimed invention. None of the cited references appreciate these advantages.

III. REJECTION OVER POIRIER IN VIEW OF LISENKO AND LIBUTTI ET AL.

In paragraphs 7-12, the Examiner has rejected claims 4-6 as obvious under 35 U.S.C. § 103(a) over Poirier (WO 01/23819) in view of Lisenko and Libutti et al. Applicant respectfully traverses this rejection and requests reconsideration and withdrawal thereof.

Applicant notes that the Examiner has relied upon Poirier in the form of a PCT publication. However, the publication date of this reference is after Applicant's filing date. As a result, the PCT publication is not available as a reference against the claims. If, instead, the Examiner meant to rely on Poirier in the form of U.S. Patent No. 6,337,015, which appears to have a 102(e) date of September 11, 2000, then the comments below apply.

Poirier does not cure the deficiencies of Lisenko and Libutti et al. noted above. Poirier discloses granular activated carbon in a "flat" form that can be disposed on the external surface of a refrigerator. Nothing in Poirier teaches or suggests a rigid porous block of activated carbon and zirconia. As described above, neither Lisenko nor Libutti et al. contain such a teaching or suggestion. Aside from the lack of motivation to combine Lisenko with Libutti et al. noted above, combination of either

or both with Poirier does not give the claimed invention. Again, the Examiner has failed to establish a prima facie case of obviousness, and the rejection should be withdrawn.

IV. REJECTION OVER PEDERSEN IN VIEW OF LISENKO AND LIBUTTI ET AL.

In paragraphs 13-18, the Examiner has rejected claims 10-12 as obvious under 35 U.S.C. § 103(a) over Pedersen (U.S. Patent No. 5,118,655) in view of Lisenko and Libutti et al. Applicant respectfully traverses this rejection and requests reconsideration and withdrawal thereof.

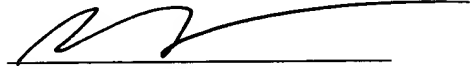
Again, Pedersen completely fails to cure the deficiencies of Lisenko and Libutti et al. because it is directed to a particulate filtration media. The cartridges described in Pedersen are merely containers for the granulated filtration media. There is no teaching or suggestion in either Pedersen, Lisenko, or Libutti et al. to make a rigid, porous block containing activated carbon, zirconia, and binder. The Examiner has again failed to establish a prima facie case of obviousness, and the rejection should be withdrawn.

CONCLUSION

Applicant respectfully submits that the claims of this application are in condition for immediate allowance, and an early notification thereof is earnestly solicited. If the Examiner believes that further issues remain, she is requested to contact the undersigned to arrange for an interview prior to issuance of a final office action.

The Commissioner is hereby authorized to charge any deficiencies or credit
any overpayment to Deposit Order Account No. 11-0855.

Respectfully submitted,

A handwritten signature in dark ink, appearing to be 'Bruce D. Gray', written over a horizontal line.

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